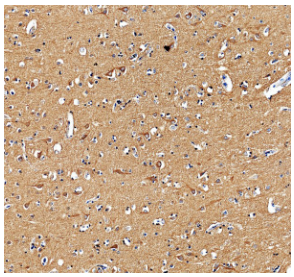
RTN3 Antibody / Reticulon 3 Polyclonal Antibody (R31380)

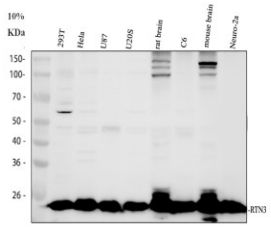
Catalog No.	Formulation	Size
R31380	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	O95197
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This RTN3 Antibody / Reticulon 3 Polyclonal Antibody is available for research use only.



RTN3 Antibody staining of human brain neurons by IHC. Immunohistochemistry of FFPE human brain sections using the RTN3 Antibody at 2 ug/ml. Strong brown staining is visible throughout the neuropil, with distinct cytoplasmic labeling of numerous neuronal cell bodies. Nuclei are counterstained blue and remain largely negative. Heat-induced epitope retrieval was performed in pH 8 EDTA buffer before overnight primary antibody incubation at 4oC. The predominantly cytoplasmic staining pattern is consistent with the intracellular membrane-associated localization of Reticulon 3 and demonstrates detection with this Reticulon 3 Polyclonal Antibody.



RTN3 Antibody detection in human, rat and mouse samples by WB. Western blot testing with the RTN3 Antibody under reducing conditions. Lane 1: human 293T; lane 2: human HeLa; lane 3: human U87; lane 4: human U2OS; lane 5: rat brain; lane 6: rat C6; lane 7: mouse brain; lane 8: mouse Neuro-2a. A prominent RTN3-reactive band is detected at approximately 25 kDa across the tested samples. Although the longest RTN3 isoform has a calculated molecular weight of approximately 113 kDa, multiple shorter RTN3 isoforms are reported in the approximately 24-28 kDa range, consistent with the observed migration detected by this Reticulon 3 Polyclonal Antibody.

Description

RTN3 Antibody / Reticulon 3 Polyclonal Antibody recognizes reticulon 3, a member of the reticulon family of proteins associated primarily with the endoplasmic reticulum. RTN3 is an integral membrane protein encoded by the RTN3 gene and is characterized by a conserved C-terminal reticulon homology domain containing two hydrophobic membrane-associated regions. This structural organization allows reticulon proteins to adopt a characteristic hairpin topology within the membrane and contribute to the highly curved membrane structures of the tubular endoplasmic reticulum. Multiple RTN3 isoforms have been described, reflecting alternative transcript processing and contributing to substantial variation in protein size.

Reticulon 3 participates in the organization and dynamics of the endoplasmic reticulum membrane network. Together with other reticulon family members, RTN3 contributes to membrane curvature and the formation of ER tubules. The protein has also been associated with cellular responses to endoplasmic reticulum stress and with processes affecting protein trafficking and membrane organization. An RTN3 Antibody can therefore support investigation of reticulon biology and mechanisms controlling the structure and function of the endoplasmic reticulum.

RTN3 has attracted particular interest in neuroscience because of its relationship with beta-site amyloid precursor protein cleaving enzyme 1, commonly known as BACE1. Reticulon proteins can interact with BACE1 and influence its activity and cellular localization, thereby affecting amyloid precursor protein processing and amyloid beta production. RTN3 is expressed in neuronal tissues, and alterations in its abundance, localization or aggregation have been investigated in connection with neurodegenerative processes. These observations connect Reticulon 3 Polyclonal Antibody research with studies of neuronal membrane biology, amyloid processing and mechanisms relevant to Alzheimer's disease.

Beyond its relationship with BACE1, RTN3 has been investigated in the broader context of ER morphology, protein homeostasis, cellular stress and membrane-associated signaling. Its functions illustrate the relationship between organelle architecture and cellular physiology, particularly in cells with extensive endoplasmic reticulum networks. NSJ Bioreagents provides this reagent for researchers investigating RTN3 expression and reticulon biology. An RTN3 Antibody provides a useful tool for studying Reticulon 3, endoplasmic reticulum organization and pathways connecting ER membrane biology with neuronal protein processing.

This RTN3 Antibody is part of our Neuroscience Antibodies collection.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the RTN3 Antibody / Reticulon 3 Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of human Reticulon 3 (EKIQAKLPGIAKKKAE) was used as the immunogen for this RTN3 Antibody (100% homologous in human, mouse and rat).

Storage

After reconstitution, the RTN3 Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Reticulon 3 antibody, Reticulon-3 antibody, NSPL2 antibody, Neuroendocrine-Specific Protein-Like 2 antibody, ASYIP antibody

References (1)

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